

HUMAN PERFORMANCE 2003

Driving Progress in Individual & Team Performance

Complete information online: <http://advtech.jsc.nasa.gov/humanperf.asp>

Organized by Advanced Technology Integration Group at NASA's Johnson Space Center

WHO: Approximately 100 technology developers and users from NASA, other government agencies, the military and Department of Defense, and academia (limited attendance).

WHAT: Small-scale, technology-focused symposium on the solutions that advance individual and team performance in remote or hostile environments. Below is a sampling of proposed topics for HP 2003, with the complete list to be posted online:

Non-Invasive Measuring and Monitoring

- Continuous, real-time monitoring of team and individual performance for training, simulation, and real operations
- Display and control of medical, physiological, and human performance data
- Wrist bands or dog tags that collect medical data and can be queried by PDA
- Three-dimensional tracking of the human body during high activity operations
- EEG electrode arrays that give continuous real-time 3-D determinations of brain activity with high-spatial/anatomical resolution

Human-Machine Interfaces, Workload, and Decision-Making

- Wireless computers with multimedia, monocular displays for training and decision support
- Dynamic decision support for workload management (human vs. automation)
- Data manipulation technologies that allow individuals and teams to extract only the most relevant information from diverse data sources during time-critical, emergency operations
- Real-time natural language understanding that allows automated information extraction
- Spoken language interfaces for high-noise environments

Physical and Mental Performance Enhancers

- Performance enhancers for vigilance/attentiveness, memory, and mental performance including pharmaceuticals, nutritional supplements, biofeedback, etc.
- Reliable, real-time measures of human cognitive workload, vigilance, and fatigue
- Miniaturized, field-capable, and non-obtrusive measures of eye movements, auditory and visual evoked potentials, EEG, and other psychophysiological measures
- Rapid assessment tools that determine psychological and physiological fitness
- Ethical prediction methods of resilience during severe, acute and high, continuous stress

WHEN: October 28 – 29, 2003; note date change announced July 2003

WHERE: Gilruth Conference Center at NASA Johnson Space Center in Houston, Texas

WHY: To address the most critical technology needs and best solutions for human performance in a forum that encourages education, networking, and collaboration

HOW: *Participants and speakers do NOT pay any registration fee!* But there are NO funds to defray travel, hotel, or meal costs for HP 2003.

Advanced Technology Integration Group

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<http://advtech.jsc.nasa.gov/humanperf.asp>